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TRANSMITTAL OF APPEAL BRIEF			Docket No. SON-1659/CON	
In re Application of: Takashi Hirakawa et al.				
Application No. 10/811,246-Conf. #9013	Filing Date March 29, 2004	Examiner C. E. Leiby	Group Art Unit 2673	
Invention: LIQUID-CRYSTAL DISPLAY APPARATUS AND THREE-PANEL LIQUID-CRYSTAL DISPLAY PROJECTOR				
<p style="text-align: center;"><b><u>TO THE COMMISSIONER OF PATENTS:</u></b></p> <p>Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed: <u>June 4, 2008</u></p> <p>The fee for filing this Appeal Brief is <u>\$ 510.00</u></p> <p><input checked="" type="checkbox"/> Large Entity      <input type="checkbox"/> Small Entity</p> <p><input type="checkbox"/> A petition for extension of time is also enclosed.</p> <p>The fee for the extension of time is _____</p> <p><input type="checkbox"/> A check in the amount of _____ is enclosed.</p> <p><input checked="" type="checkbox"/> Charge the amount of the fee to Deposit Account No. <u>18-0013</u> This sheet is submitted in duplicate.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. <u>18-0013</u> This sheet is submitted in duplicate.</p> <div style="text-align: center;"> 40,290</div> <div style="display: flex; justify-content: space-between;"><div>Ronald P. Kananen/Christopher M. Tobin Attorney Reg. No. : 24,104/40,290 RADER, FISHMAN &amp; GRAUER PLLC 1233 20th Street, N.W. Suite 501 Washington, DC 20036 (202) 955-3750</div><div>Dated: <u>September 12, 2008</u></div></div>				



Docket No.: SON-1659/CON  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Takashi Hirakawa et al.

Application No.: 10/811,246

Confirmation No.: 9013

Filed: March 29, 2004

Art Unit: 2629

For: LIQUID-CRYSTAL DISPLAY APPARATUS  
AND THREE-PANEL LIQUID-CRYSTAL  
DISPLAY PROJECTOR

Examiner: C. E. Leiby

**APPELLANT'S BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal Brief under 37 C.F.R. §41.37 appealing the final decision of the Examiner dated February 20, 2008. Each of the topics required by 37 C.F.R. §41.37 is presented herewith and is labeled appropriately. This brief is in furtherance of the Final Office Action on February 20, 2008.

A Notice of Appeal was filed in this case on June 4, 2008, along with a Request for Panel Review.

The Notice of Panel Decision from Pre-Appeal Brief Review mailed on August 14, 2008. ("the Decision") indicates that claims 11-16 remain rejected. The Decision further indicates that the extendable time period for the filing of the Appellant's Brief will be reset to be one month from the mailing of the Decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater.

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Accordingly, the filing of the Appellant's Brief is timely. 37 C.F.R. §1.136.

## **I. REAL PARTY IN INTEREST**

Sony Corporation of Tokyo, Japan ("Sony") is the real party in interest of the present application. An assignment of all rights in the present application to Sony was executed by the inventor and recorded by the U.S. Patent and Trademark Office at **reel 010319 frame 0411**.

## **II. RELATED APPEALS AND INTERFERENCES**

A Decision on Appeal has been mailed in parent application No. 09/417,714 on January 29, 2004.

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

## **III. STATUS OF CLAIMS**

Within the Final Office Action of February 20, 2008:

Paragraph 2 of the Final Office Action indicates a rejection of claims 11-15 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,260,797 to (Muraji) in view of U.S. Patent No. 4,319,237 (Matsuo).

Paragraph 3 of the Final Office Action indicates a rejection of claim 16 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,260,797 to (Muraji) in view of U.S. Patent No. 4,319,237 (Matsuo), in view of U.S. Patent No. 5,831,709 (Song).

Thus, the status of the claims is as follows:

Claims 1-10: (Canceled);

Claims 11-16: (Rejected).

No claims are indicated within the Final Office Action to contain allowable subject matter.

Accordingly, Appellant hereby appeals the final rejection of claims 11-16 which are presented in the Claims Appendix.

#### IV. STATUS OF AMENDMENTS

Provided is a statement of the status of any amendment filed subsequent to final rejection.

Subsequent to the final rejection of February 20, 2008, an Amendment After Final Action Under 37 C.F.R. 1.116 has been filed on April 4, 2008.

The Advisory Action of May 13, 2008 has indicated that the Amendment would not be entered for the purposes of appeal.

#### V. SUMMARY OF CLAIMED SUBJECT MATTER

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

<b>Claim 11</b> is drawn to a liquid-crystal display apparatus comprising:	
a common voltage adjustment circuit (39) adapted to adjust a common voltage (Vcom);	Specification at page 10, lines 2-8
a chrominance non-uniformity correction circuit (21) adapted to generate a chrominance non-uniformity correction signal, said chrominance non-uniformity correction signal being superimposable onto said common voltage (Vcom) or said primary color video signal;	Specification at page 12, line 23 to page 13, line 5
a display panel (1R, 1G, 1B) adapted to receive said common voltage (Vcom) and a primary color video signal, a difference between said common voltage (Vcom) and said primary color video signal being applied to said display panel (1R, 1G, 1B).	Specification at page 10, lines 10-15

<b>Claim 16</b> is drawn to a liquid-crystal display apparatus according to claim 11, wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage (Vcom).	Specification at page 10, lines 10-15
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## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for consideration in this appeal are as follows:

Whether the Examiner erred in rejecting claims 11-15 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,260,797 to (Muraji) in view of U.S. Patent No. 4,319,237 (Matsuo).

Whether the Examiner erred in rejecting claim 16 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 6,009,236 to (Mishima) and U.S. Patent No. 4,319,237 (Matsuo), in view of U.S. Patent No. 5,831,709 (Song).

These issues will be discussed hereinbelow.

## VII. ARGUMENT

**The Examiner erred in rejecting claims 11-15 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,260,797 to (Muraji) in view of U.S. Patent No. 4,319,237 (Matsuo).**

This rejection is traversed at least for the following reasons.

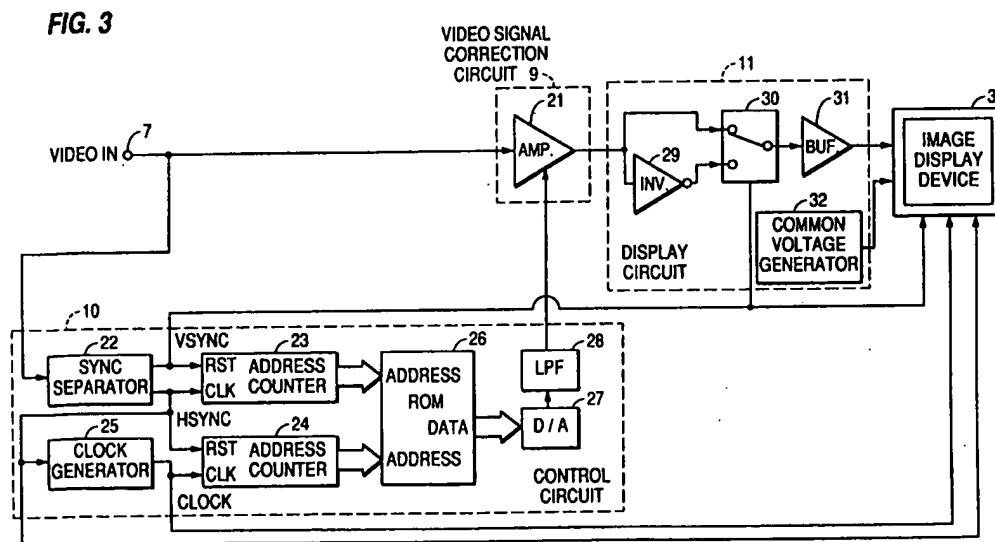
**Claims 11-15** - Claims 12-15 are dependent upon claim 11. Claim 11 is drawn to a liquid-crystal display apparatus comprising:

a common voltage adjustment circuit (39) adapted to adjust a common voltage (Vcom);

a chrominance non-uniformity correction circuit (21) adapted to generate a chrominance non-uniformity correction signal, said chrominance non-uniformity correction signal being superimposable onto said common voltage (Vcom) or said primary color video signal;

a display panel (1R, 1G, 1B) adapted to receive said common voltage (Vcom) and a primary color video signal, a difference between said common voltage (Vcom) and said primary color video signal being applied to said display panel (1R, 1G, 1B).

**Muraji** - Figure 3 of Muraji is provided hereinbelow.



The liquid crystal cell 42 is connected to the drain of the thin film transistor 41 and to the common electrode 43 (Muraji at column 5, lines 9-11).

A specified voltage is supplied by a common voltage generating circuit 32 to the common electrode 43 of the image display device 3 (Muraji at column 5, lines 29-32).

A specified voltage is supplied to the common electrode of the image display devices 59, 60, and 61 by common voltage generator circuits 93, 97, and 101 (Muraji at column 7, lines 44-47).

However, Muraji fails to teach a difference between the specified voltage and a primary color video signal being applied to the common electrode 43.

- ***Thus, Muraji fails to disclose, teach, or suggest a display panel adapted to receive said common voltage and a primary color video signal, a difference between said common voltage and said primary color video signal being applied to said display panel.***

**Matsuo** - The Final Office Action admits an absence within Muraji of a common voltage adjustment circuit (Final Office Action at page 2). Instead, Matsuo is cited for the features that are admittedly absent from within Muraji.

Matsuo at column 7, lines 3-30 provides the following:

Three embodiments for automatically compensating for a scattering level change caused by a change of the threshold voltage  $V_{th}$  when the temperature changes, will first be described referring to FIGS. 9 to 11. In the figures, reference numerals 1 to 5 designate those designated by the same numerals in FIG. 1. **Reference numeral 39 designates a DC power source terminal**, 40 is a temperature-dependent resistor, 41 is a variable resistor for adjusting the common electrode voltage, and 42 is a fixed resistor. With such a construction, if the temperature coefficient of the resistor 40 is set to a proper positive or negative value, the common electrode voltage may be changed in accordance with temperature. In other words, the voltage applied to the liquid crystal may be changed to compensate for a change of the threshold voltage of the liquid crystal due to a change in the ambient temperature. In the above-mentioned embodiment, the temperature-dependant resistor is used for the resistor 40, however, such a resistor may be used for both the resistors 40 and 42. Accordingly, the above-mentioned embodiment can make temperature compensation without any additional requirement for the video signal processing circuit 7.

Turning now to FIG. 10, there is shown another embodiment of the invention. In the figure, numeral 43 is a terminal connected to a common electrode terminal of a matrix panel. Numerals 44 to 47 are resistors. Numeral 48 designates a power source terminal.

Figures 8-11 of Matsuo are provided hereinbelow.

FIG. 8

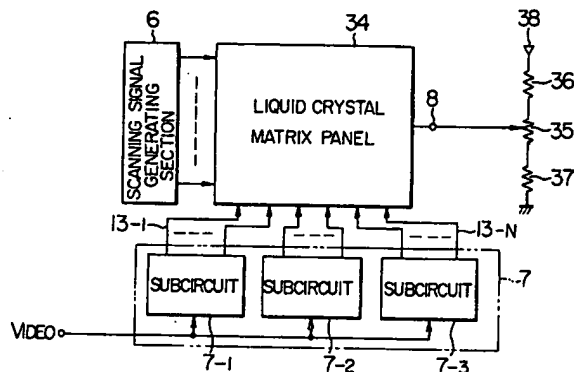


FIG. 9

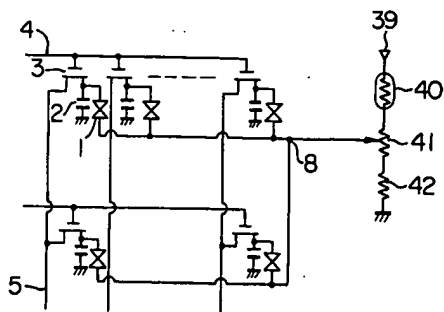


FIG. 10

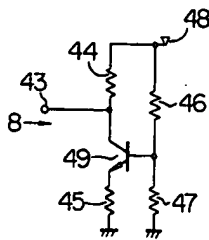
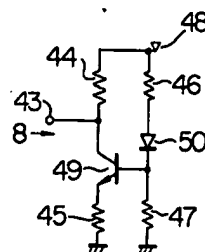


FIG. 11



In FIG. 8, reference numeral 38 is a DC voltage source terminal, numeral 35 is a variable resistor for adjusting the voltage applied to the common electrode 8, and numerals 36 and 37 are fixed resistors for limiting a variable range of the variable resistor 35 (Matsuo at column 6, lines 28-33).



- *However, Matsuo fails to disclose, teach, or suggest a display panel adapted to receive said common voltage and a primary color video signal, a difference between said common voltage and said primary color video signal being applied to said display panel.*

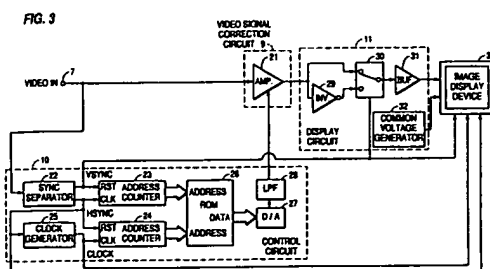
Instead, Matsuo provides that the voltages stored in the memory capacitors 2 are held until the MOS FETs are next turned on, after those are turned off (Matsuo at column 1, lines 37-40). During this period, each liquid crystal cell 1 is continuously driven by a difference between the voltage stored in the memory capacitor 2 and the voltage  $V_c$  at a common electrode terminal 8 (Matsuo at column 1, lines 40-43).

**The Examiner erred in rejecting claim 16 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 6,009,236 to (Mishima) and U.S. Patent No. 4,319,237 (Matsuo), in view of U.S. Patent No. 5,831,709 (Song).**

This rejection is traversed at least for the following reasons.

**Claim 16 stands or falls separately** - Claim 16 is dependent upon claim 11. Claim 16 is drawn to a liquid-crystal display apparatus according to claim 11, wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage ( $V_{com}$ ).

**Mishima** - Figure 3 of Mishima is provided hereinbelow.



A specified voltage is supplied by a common voltage generating circuit 32 to the common electrode 43 of the image display device 3 (Muraji at column 5, lines 29-32).

However, Muraji fails to disclose, teach, or suggest the common voltage generating circuit 32 being adapted to adjust a common voltage.

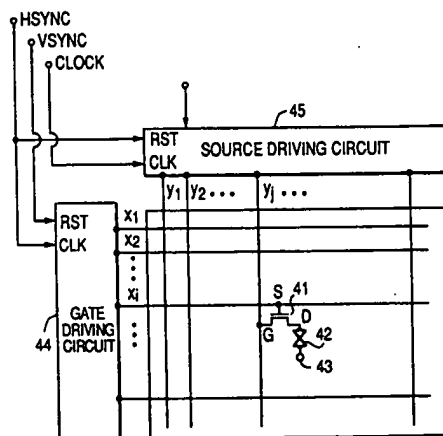
- ***Thus, Muraji fails to disclose, teach, or suggest a common voltage adjustment circuit adapted to adjust a common voltage.***

Muraji arguably teaches that the liquid crystal cell 42 is connected to the drain of the thin film transistor 41 and to the common electrode 43 (Muraji at Figure 5, column 5, lines 9-11).

Figure 5 of Muraji is a block diagram of portions of an active matrix type liquid crystal display device used as an example of an image display device.

Figure 5 of Mishima is provided hereinbelow.

**FIG. 5**



However, Muraji fails to disclose, teach, or suggest a difference between a common voltage and a primary color video signal being applied to the common electrode 43 (Muraji at Figure 5).

- ***Thus, Muraji fails to disclose, teach, or suggest a display panel adapted to receive said common voltage and a primary color video signal, a difference between said common voltage and said primary color video signal being applied to said display panel.***

Furthermore, the Final Office Action readily admits that Muraji fails to apply a correction voltage added to a common voltage (Final Office Action at page 3).

- ***Thus, Muraji fails to disclose, teach, or suggest a liquid-crystal display apparatus wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage.***

Matsuo - Matsuo fails to disclose, teach, or suggest the presence of a chrominance non-uniformity correction signal.

- ***Thus, Matsuo fails to disclose, teach, or suggest a liquid-crystal display apparatus wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage.***

Song - Song arguably teaches that a preferred embodiment of an LCD according to the present invention, as shown in FIG. 4a, includes a plurality of scan lines 124, a plurality of data lines 123, and a display area having a pixel electrode 220 and a thin film transistor 121 at each intersection area of the scan lines 124 and data lines 123 and a common electrode 114, shown as a dashed-line square (Song at column 4, lines 49-55).

The Advisory Action of May 13, 2008 contends that Song teaches the presence of a common line 100 being connected to a common electrode 114 (Advisory Action at page 2).

However, Song fails to disclose, teach, or suggest the presence of a chrominance non-uniformity correction signal.

- *Thus, Song fails to disclose, teach, or suggest a liquid-crystal display apparatus wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage.*

### Conclusion

The claims are considered allowable for the same reasons discussed above, as well as for the additional features they recite.

Reversal of the Examiner's decision is respectfully requested.

Dated: September 12, 2008

Respectfully submitted,

By 

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Attorneys for Applicant

## CLAIMS APPENDIX

1-10. (Canceled)

11. A liquid-crystal display apparatus comprising:

a common voltage adjustment circuit adapted to adjust a common voltage;

a chrominance non-uniformity correction circuit adapted to generate a chrominance non-uniformity correction signal, said chrominance non-uniformity correction signal being superimposable onto said common voltage or said primary color video signal;

a display panel adapted to receive said common voltage and a primary color video signal, a difference between said common voltage and said primary color video signal being applied to said display panel.

12. A liquid-crystal display apparatus according to claim 11, wherein a brightness adjustment circuit is adapted to adjust a brightness of said primary color video signal in response to said chrominance non-uniformity correction signal.

13. A liquid-crystal display apparatus according to claim 11, wherein said primary color video signal is one of a red video signal, a green video signal, and a blue video signal.

14. A liquid-crystal display apparatus according to claim 11, wherein said chrominance non-uniformity correction signal is superimposed onto said primary color video signal.

15. A liquid-crystal display apparatus according to claim 14, wherein a brightness adjustment circuit is adapted to adjust a brightness of said primary color video signal in response to said chrominance non-uniformity correction signal.

16. A liquid-crystal display apparatus according to claim 11, wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage.

## **EVIDENCE APPENDIX**

There is no other evidence which will directly affect or have a bearing on the Board's decision in this appeal.

## **RELATED PROCEEDINGS APPENDIX**

A Decision on Appeal has been mailed in parent application No. 09/417,714 on January 29, 2004.

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.